SunSumSolar

旭和光電股份有限公司

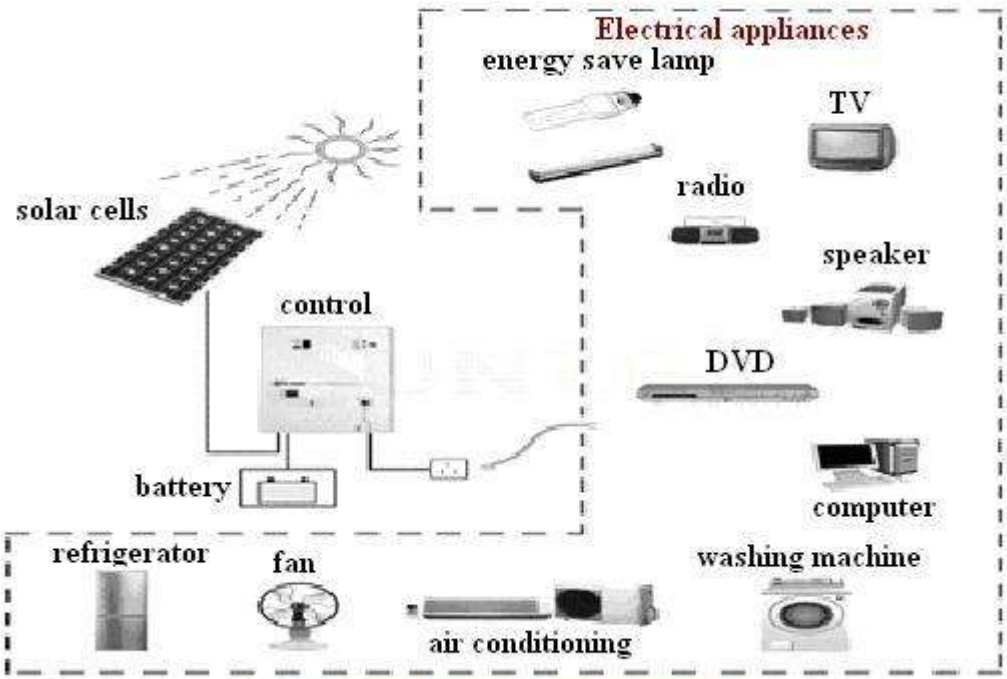
Solar Generator System

50W solar home system

The solar home system is specialized to design for the village domestic expenses of the without electric region. It is a set of solar power the equipments, having to sweep free from pollution, safety credibility, the service life is long and circulates the expenses low, do not need maintenance of advantage and so on .

1、Solar home system operating principle

The solar home system include: solar panel, solar panel bracket, battery, solar charge controller, inverter and so on.



Solar system home appliance diagram

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Store light can convert into the electric power, through power box (refresh the control and go against to change the device) electric power in the storage battery through the solar cell module, pass the power box toward the load power supply.

Key Features ：

1. System structural is very simple, easy to operate

2. Very suitable for living in scattered villages.

3. A set of solar power the equipments, having to sweep free from pollution, safety credibility, the service life is long and circulates the expenses low, do not need maintenance of advantage and so on .

2、The design of solar home system :

1) Solar panel specification：50w/12v

2) Solar panel quantity：1pcs

3) The kind of battery：Gel battery (free maintenance)

4) Battery specification：12V/75Ah

5) Battery quantity：1pcs

6) Continuous work with no sun：3 days

7) The controller：10A/12V

8) Controller quantity：1pcs

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Power box : include the controller and battery.

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3、The component of solar system

1. Solar panel

50Watt
Polycrystalline Solar Panel

SunSumSolar
www.sunsumsolar.com

Professional And Reliable Solar Panel Manufacturer

Characteristics	SPM45-P	SPM50-P	SPM55-P
Maximum power(Pm)	45.0W	50.0W	55.0W
Power Tolerance	±5%	±5%	±5%
Voltage at max power(Vmp)	17.4V	17.4V	17.4V
Current at max power(Imp)	2.58A	2.87A	3.16A
Open circuit voltage(Voc)	21.6V	21.6V	21.6V
Short circuit current(Isc)	2.84A	3.16A	3.47A
Operating Temperature	-40℃ to +85℃	-40℃ to +85℃	-40℃ to +85℃
Maximum System Voltage	715V	715V	715V
Maximum Series Fuse Rating	10A	10A	10A
Standard Test Condition	Irrandiance 1000W/m², Module temperature 25℃, AM=1.5		

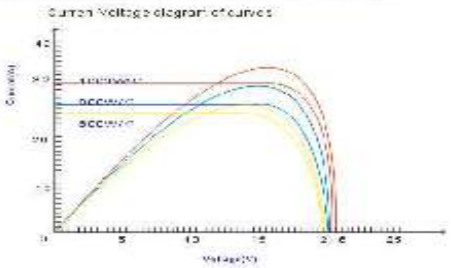
Mechanical Characteristics

Solar cell: Polycrystalline silicon solar cell 156×156mm(6 inch)
No. of cells and connections: 36 (4 × 9 pcs)
Dimensions of module: 500×670×28mm(19.5×26.4×0.9 inch)
Weight: 5.0kg
Junction Box: IP65 rated
Packing Configuration: 4PCS/CTN, 690×700×135mm(24.8×27.5×5.3inch)
Warranty: Pm is not less than 90% in 10 years and 80% in 20 years
Resistances: 227g steel ball fall down from 1m height and 80m/s wind

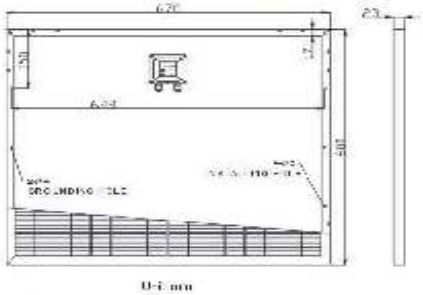
Temperature Coefficients

Noct: 48℃ ± 2℃
Current temperature coefficient: 0.06 ± 0.04%/℃
Voltage temperature coefficient: -(78 ± 10) MV/K
Power temperature coefficient: -(0.5±0.05)%/K

Current-Voltage diagram of curves



Mechanical Characteristics



IEC 61215 ed.2 IEC61730 and Safety Class II
Sunny Power is ISO9001 certified and registered

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2. Controller

- Battery State-of-Charge display LCD
- Charge and discharge status display
- Acoustic load disconnect pre-warning
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- Choose between 5 load disconnect algorithms
- boost/absorption/float PWM-regulation (series type)
- Integrated temperature compensation
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- Full solid-state protection

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The CX series is a sophisticated solar charge controller family with exceptional features for its price range. Beside a perfect PWM regulation with integrated temperature compensation the controllers provide extraordinary display, programming and safety functions.

The battery state of charge is clearly displayed with a bar chart, as well as energy flows from and to the battery and the load status (e.g. overload, load short circuit). The deep discharge protection function can be set up to three different modes: voltage controlled, SOC controlled or adaptive (fuzzy logic).

Acoustic warnings are built in, and also a programmable nightlight function.

As an accessory we can provide an Excess Energy Management output to control special Phocos appliances like the SF solar refrigerators/coolers.

The compact case design is prepared for DIN rail mounting (mounting device available as an accessory).

TYPE	CX10	CX20	CX40
Charge current max.	10A	20A	40A
Load current max.	10A	20A	40A
System voltage	12/24V	12/24V	12/24V
Self power consumption	<4mA	<4mA	<4mA
Dimensions(w*h*d)	<4mA	<4mA	<4mA
Type of protection	IP22	IP22	IP22

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3. Battery

1. SIZES:

Dimension	mm
Length	261mm ± 2
Width	168mm ± 2
Height	203mm ± 2
Total Height	220mm ± 2

2. CHARATERISTIC:

Properties		Data			
Voltage		12 V			
Capacity		75AH			
Weight		**ca.22.3 Kg**			
Shelf Life at 25℃	1 month	98 % ↑			
	3 month	90 % ↑			
	6 month	80 % ↑			
Rated Capacity at 20℃	rate	charge Current	cutoff Voltage	discharge time	capacity
	20 HR	3.75A	10.50 V	21hrs	**78AH**
	10 HR	7.5A	10.50V	10hrs	**75AH**
	5 HR	12.75A	10.50 V	5hrs	**63AH**
	30 min	75A	9.60V	35mins	**43AH**
	15 min	150A	9.60V	16mins	**40AH**
	7 min	225A	9.60V	7mins	**26AH**
internal resistance	ca.4.60mΩ		terminal		
Use temperature	Discharge	-40℃(-40℉) ~ 65℃ (149℉)			
	Charge	-40℃(-40℉) ~45 (113℉)			
	Standby	-15℃(5℉) ~ 40℃ (104℉)			
Maximum discharge current		1500A	Maximum short current	2000A	
Charging voltage	Standby use	13.5~13.8V (-20mV/℃)			
	Cyclic use	14.4~16.0V (-30mV/℃) Recommend* 15.6~16.0V			
Maximum charging current		150A			

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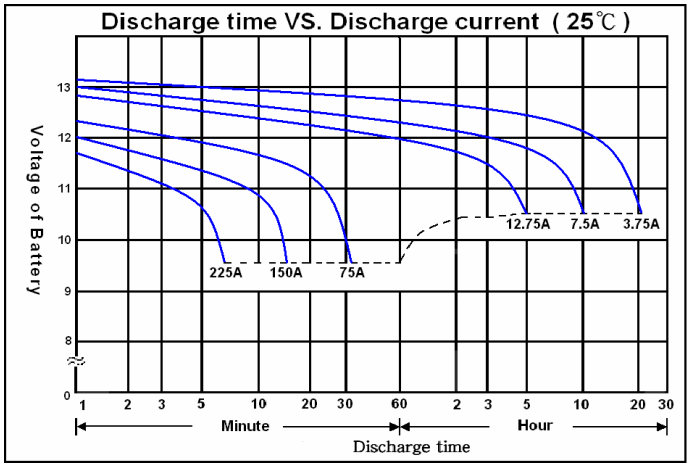
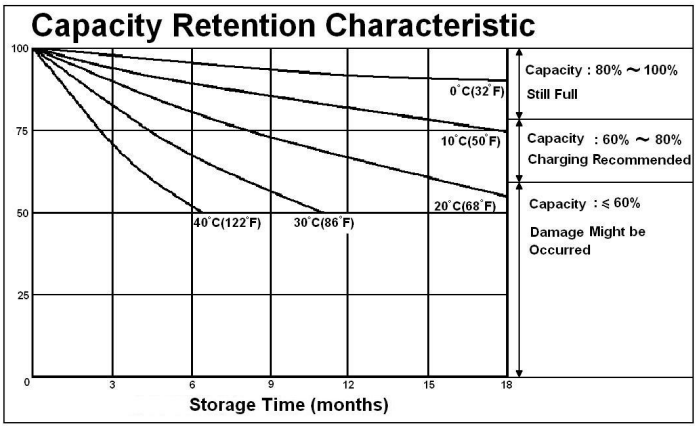
3. DISCHARGE CURVES：





LIFE:

type	life	
cycle life	depth of discharge: 100%	> 500 cycles
	depth of discharge: 50%	> 1200 cycles
	depth of discharge: 30%	> 2000 cycles
UPS (20℃)	3 ~ 5 Years	

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4. Fan

1. If need perfect wind orientation, please hand adjust orientation by adjusting the wind cover, to be sure the fan is closed before adjustment. If it couldn't be turned during adjustment, it should be on the biggest point of orientation.

2. When you need to deposit the fan for long time, please charge up the electricity up, please be sure too keep all the switch off.

II. How to use the emergency light

There's a slide switch with light ico on the right side the fan, slide the button to upside "LIGHT", it's lighting, slide the button to down side "SPOT LIGHT" for night working purpose, slide the button to the middle side "OFF" to close the light.

III. Technical parameter

1. Fan working voltage:	DC12V
2. Light working voltage:	DC3.3V
3. Charging time:	10-15H
4. Biggest output power:	16W

IV. The maintenance of the batteries

1. When the fan should be deposited for long time, please turn off all the switches, and charge it for 10-15hours, and pull out the power cord before deposit.
2. During deposit, please charge up the fan for every two months.

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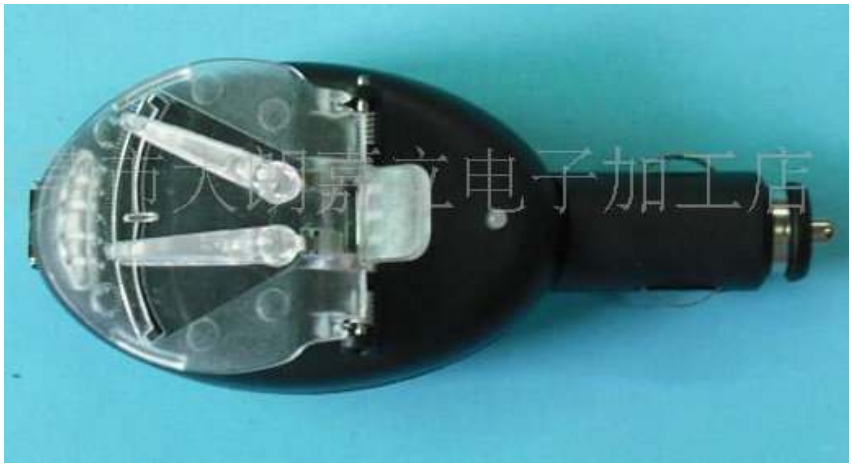
V. Caution

Please don't assemble or restructure the circuit board configuration, and strictly prohibit to put the fan in dank place or beside the causticity substance, or it probably will cause an electric shock, meanwhile, it' break the batteries, charger and short the batteries' life.

5. Car charge



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6. Led

JBZM-Ⅱ Civil Lights
Material
Aluminium reflector and heat sink;
Acrylic cover;
PBT light holder with white environment friendly material;
Single powerful LED light source;
AC85V-AC265V wide range of constant-current source.
Usage
Corridors, offices, schools, stores, households and some other indoor places where need lighting.
Feature
Use single powerful LED(3W - 7W) as the light source, with our own intellectual property rights for LED encapsulation.Utilize the special design of multichip single module. Choose the imported high brightness semiconductor chips. With the characters of high heat conductivity, low luminous decay, pure light color and no ghosting.
Use solid light source without glass cover, tungsten filament or another wearing parts. Choose the common E27 connector, can be easily connect to the AC 85V-265V connectors. It's much more safe and convenient.
Obvious power-saving efficiency. The power range is from 3W to 7W. The brightness is equal to 25W to 55W incandescent light, It can save electricity around 80%.
Its special design for heat sink system can make sure the 50000 hours life span. Need not change the LED light source; the maintenance charges are much lower.
No ill glare; No frequently flash. It can eliminate the ill glare, vision fatigue and disturbance aroused by traditional streetlight and also can improve the safety of the driving.
The color and color temperature of LED can be chosen flexibly. It can meet the different requirements of different clients. And this provides much convenience for different lighting designs.
No delay start; No waiting. It can reach its normal light as soon as it is turned on. It can be turned on and turned off over million times.
It's an excellent partner of the Solar panel system. It can exert many merits such as working with direct current and lower voltage. It is power saving and environment friendly. The connection of the solar panel and LED light source provide a high reliability, a best feature and a reasonable prize to the clients.
LED Lighting the World
Green Lights Benefiting Mankind

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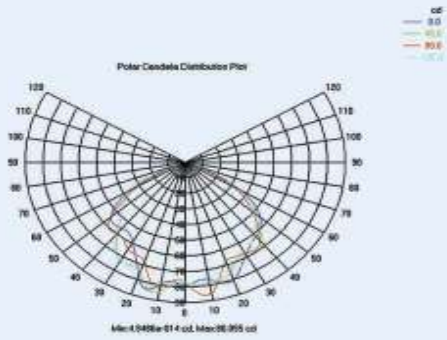
Specification

Model	LED Power	Voltage	Power Factor（PF）	LED Luminous Efficiency	Initial Luminous Flux
JB25ZM3W	3W	AC（85V～265V）/Frequency（50～60Hz） DC（12V 24V 36V）	≥ 0.9	80lm/W	240lm
JB55LD5W	5W	AC（85V～265V）/Frequency（50～60Hz） DC（12V 24V 36V）	≥ 0.9	80lm/W	400lm
JB55ZM7W	7W	AC（85V～265V）/Frequency（50～60Hz） DC（12V 24V 36V）	≥ 0.9	80lm/W	560lm

Model	Efficiency of the Light	Effective Light Angle	Color Rendering Index	Color Temperature	Life Span	Net Weight(kg)
JB25ZM3W	≥90%	65°	Ra ≥ 80	2700K～7000K	≥50000Hrs	0.14
JB55LD5W	≥90%	65°	Ra ≥ 80	2700K～7000K	≥50000Hrs	0.18
JB55ZM7W	≥90%	65°	Ra ≥ 80	2700K～7000K	≥50000Hrs	0.21



Road Lighting Project in France

The project pictures are just for reference

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